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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,379	10/18/2005	Gerhard Eser	78857.105313	3677

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EXAMINER	
COLEMAN, KEITH A	
ART UNIT	PAPER NUMBER
3741	

NOTIFICATION DATE	DELIVERY MODE
07/22/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

AustinUSPTO@kslaw.com
AustinIP@kslaw.com

Office Action Summary	Application No.	Applicant(s)	
	10/553,379	ESER ET AL.	
	Examiner	Art Unit	
	KEITH COLEMAN	3747	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 April 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10,12-17,19-23 and 25-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10,12-17,19-23 and 25-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of the Claims

Claims 1-9, 11, 18, and 24 have been cancelled. Claims 27-29 have been added. Overall, claims 10, 12-17, 19-23, 25, and 26-29 are pending in this case.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 10, 12-17, 19-23, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amann et al. (US Patent No. 5,345,916) in view of Oono (US Patent No. 6,889,666)

With regards to claims 10, 12, 25 and 26, the patent to Amann et al. discloses all the limitations of the claimed subject matter including a method for controlling a fuel pressure in a fuel supply device of an internal combustion engine having a regulator valve, the method comprising the steps of: determining a desired fuel pressure value (i.e. predetermined classic injection profiles, See Col. 4, Lines 45-55); determining an actual fuel pressure value (i.e. the fuel pressure pulses, See Figure 6); determining an actual **fuel pressure** gradient **from at least two consecutive actual fuel pressure values** (Figure 6 shows pumping rate measured in mm3/degree and fuel pressure pulses) comparing the calculated actual **fuel pressure** gradient to s specified threshold gradient value (See Figure 5A and 5B); and if the calculated actual **fuel pressure** gradient is above the specified threshold gradient value then determining an actuating signal as a function of the desired fuel pressure value and the calculated actual **fuel pressure** gradient controlling said regulator valve with said actuating signal (See Col. 4, Lines 30-45), except positively disclosing the fuel pressure is sensed by the fuel sensor. Note: Applicant has defined "gradient" as a change in pressure values as discussed in

Paragraph 24. As such, Amann et al. clearly monitors the flow rates as shown in Figures 5 and 6 and discussed on Col. 5, Lines 15-30.

As to the limitation of "a means by a flow sensor", Amann et al calculates flow by the differences in voltage from the cam angle.

Amann et al. does not disclose a fuel pressure sensor.

The patent to Oono discloses the fuel pressure being estimated and sensed by a fuel sensor (11, See Col. 4, Lines 50-55) in addition to crankshaft position and speed (See Col. 6, Lines 45-50).

Since both references are in the endeavor of controlling fuel pressures in internal combustion engines via engine-driven high pressure fuel pumps (See Col. 3, Lines 35-40 from Amann et al., See Col. 6, Lines 15-20 from Oono) and solving the same problem of accurately controlling fuel pressure through numerous engine operations, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further provide the high pressure line 22 or accumulator of Amann et al. with a fuel pressure sensor in view of the teaching to Oono, in order to accurately estimate and sense fuel pressure through numerous engine operations (See Col. 6, Lines 30-35 from Oono)

With regards to claims 13 and 19, the combination of Amann et al. and Oono discloses all the limitations of the claimed subject matter including Amann et al. disclosure of wherein the regulator valve is an electromagnetic regulator and an

exercitation of the electromagnetic regulator is influenced by the actuating signal (See Col. 4, Lines 30-40).

With regards to claims 14-17 and 20-23, the combination of Amann et al. and Oono discloses all the limitations of the claimed subject matter including Amann et al. disclosure of if the flow rate increases decreasing an energization of the electromagnetic regulator and if the flow rate falls **increasing** the energization of the electromagnetic regulator (See Col. 4, Lines 30-55).

With regards to claims 27-29, the combination of Amann et al. and Oono discloses all the limitations of the claimed subject matter including Amann et al. disclosure of supplying fuel injectors (24, See Col. 1, Lines 10-15) with fuel having the fuel pressure regulated by said regulator valve (i.e. spill valve 60).

Response to Arguments

4. Applicant's arguments with respect to claims 10, 12-17, 19-23, 25, and 26-29 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's Arguments

Applicant has amended the claim language to include the limitations of "a fuel sensor" and a sensor located in an accumulator. Applicant further contends that the

Amann et al. reference does not positively disclose the newly added limitations and claims.

Examiner's Response to Arguments

Since both references are in the endeavor of controlling fuel pressures in internal combustion engines via engine-driven high pressure fuel pumps (See Col. 3, Lines 35-40 from Amann et al., See Col. 6, Lines 15-20 from Oono) and solving the same problem of accurately controlling fuel pressure through numerous engine operations, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to further provide the high pressure line 22 or accumulator of Amann et al. with a fuel pressure sensor in view of the teaching to Oono, in order to accurately estimate and sense fuel pressure through numerous engine operations (See Col. 6, Lines 30-35 from Oono)

As such, this action is made final.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEITH COLEMAN whose telephone number is (571)270-3516. The examiner can normally be reached on 5:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Cronin can be reached on (571)272-4536. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KAC
/K. C./
Examiner, Art Unit 3747

/Michael Cuff/
Supervisory Patent Examiner, Art Unit 3741